RUST GEOTECH INC.

Spectral Gamma-Ray Borehole
Log Data Report

Borehole 41-05-10

Log Event A

Borehole Information

Farm : SX **Tank :** SX-105 **Site Number :** 299-W23-128
N-Coord : 35,475 **W-Coord :** 75,809 **TOC Elevation :** 662.23
Water Level, ft : **Date Drilled :** Unknown

Casing Record

Type : Steel-welded **Thickness :** 0.280 **ID, in. :** 6
Top Depth, ft. : 0 **Bottom Depth, ft. :** 130

Equipment Information

Logging System : 2 **Detector Type :** HPGe **Detector Efficiency:** 35.0 %
Calibration Date : 03/1995 **Calibration Reference :** GJPO-HAN-1

Logging Information

Log Run Number : 1 **Log Run Date :** 5/30/1995 **Logging Engineer:** Mike Widdop
Start Depth, ft.: 0.0 **Counting Time, sec.:** 100 **L/R :** L **Shield :** N
Finish Depth, ft. : 111.0 **MSA Interval, ft. :** 0.5 **Log Speed, ft/min.:** n/a

Log Run Number : 2 **Log Run Date :** 5/31/1995 **Logging Engineer:** Mike Widdop
Start Depth, ft.: 110.0 **Counting Time, sec.:** 100 **L/R :** L **Shield :** N
Finish Depth, ft. : 124.5 **MSA Interval, ft. :** 0.5 **Log Speed, ft/min.:** n/a

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Analysis Information

Analyst : D.C. Stromswold

Data Processing Reference : Data Analysis Manual Ver. 1 Analysis Date : 8/11/1995

Analysis Notes :

The borehole was deepened from 75 to 130 ft in 1973, and a grout plug was placed from 125 to 130 ft.

The borehole was logged in two runs: run 1 from 0 to 111 ft and run 2 from 110 to 124.5 ft.

The casing thickness was 0.31 in.; a correction factor for 0.33-in. steel casing was used during analysis.

Increases in the K-40, U-238, and Th-232 concentrations near 74 ft probably indicate a lithology change.

Cs-137 was the only man-made radionuclide detected, occurring continuously from the surface to about 20.5 ft, from 29.5 to 35.5 ft, from 56 to 62 ft, and discontinuously to TD. Continuous Cs-137 concentration of about 0.4 pCi/g occurred in the intervals from 29.5 to 35.5 ft, 56 to 61.5 ft, and 74.5 to about 77 ft. The latter interval might be associated with the apparent lithology change at that depth. A narrow region of enhanced Cs-137 also occurred at 89 to 90.5 ft, with a maximum concentration of about 4 pCi/g.

Log Plot Notes:

Three log data plots are provided. The Cs-137 concentration is provided in a separate plot to present the details of Cs-137 activity and contamination distribution. The error of the Cs-137 activity determination is shown by error bars that represent the 95-percent confidence interval. The calculated MDA is shown on this plot as open circles. If the calculated concentration is less than the MDA, it is considered a non-detect and the activity is not reported.

A plot of the naturally occurring potassium, uranium, and thorium (K-40, U-238, and Th-232) is provided to allow correlation of these data with geologic information. On the Th-232 plot, the MDA value is shown as zero at some depth locations. This zero value was a result of an anomaly in the commercial spectrum analysis software which has been corrected by the vendor. Because the MDA calculation at these few points is not significant relative to the intended use of the plot, the data were not reprocessed and corrected. Therefore, these MDA data points should be ignored.

A combination plot of individual radionuclide activities is provided that includes the total gamma-ray count rate calculated from the spectral data and the WHC Tank Farm total gamma-ray count rate data acquired with the gross gamma-ray logging systems.